

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1.-6. (CANCELED)

7. (CURRENTLY AMENDED) A method for forming multi-layer wiring structure, wherein a lower wiring layer and an upper wiring layer are electrically connected through a via hole, comprising following steps:

forming a SOG layer ~~being formed~~ from a coating liquid containing 5-40 wt. % polysilazane having a weight average molecular weight in polystyrene conversion of 1500 to 5000 wherein at least part of the active hydrogen of said polysilazane is replaced with a trimethylsilil group, directly on said lower wiring layer or ~~through~~ on a predetermined film including a hillock protection layer which is formed on said lower wiring layer in advance;

forming said upper wiring layer on said SOG layer ~~formed~~ without ~~processing of~~ using an etching back process;

forming a via hole through an etching process by using a patterned resist layer provided on said upper wiring layer as a mask;

conducting an ashing process to remove said patterned resist layer with a plasma by making ions or radicals which ~~is~~ are induced from oxygen gas as a main reactant, under an atmosphere of atmospheric pressure ~~ranging from~~ of about 0.01 Torr ~~to 30.0 Torr~~; and

~~burying~~ filling said via hole with a conductive ~~body~~ material so as to electrically connect ~~between~~ said lower wiring layer and to said upper wiring layer.